



Ø BEAT



COLO. SPRINGS,
COLORADO

F E B R U A R Y 1 9 7 8

MEETING NOTICE: The Pikes Peak Radio Amateur Association will meet this month at 7:30 pm on February 8 at the Security Savings and Loan Association Building on the corner of East Platte and Union. All interested in amateur radio are invited to attend. The program will be home-brew night, and everyone is encouraged to bring a project, in whatever state of completion or de-bugging it might be in.

THE QRP CHALLENGE: I hope this will be a monthly column dedicated to sparking interest in QRP operating.

Last May I acquired a Heath HW-8, 3 watt CW XCVR, which I set up as a portable in San Diego, California. Since living in an apartment meant no putting antennas outside the building, I erected a 40-20 dipole in the apartment. (The 40 didn't work out too well--too big--so I cut it down to a 15m dipole). I was skeptical at first and was seemingly regarded for by frame of mind by working only two San Diego stations the first month.

I was getting ready to cross QRPing off my list of things I like to do until about a month later. I was messing around and was tuning the 15 meter band and heard a 5 calling CQ. So for the want of something to do I called him and to my surprise he answered back!! WOW!! My roommate came out of the kitchen to see if I had fried myself on the 12 volt power supply.

From that time on I tried different times of day to determine when and where the propagation would be best. I coordinated my operating time for the best skip conditions with my propagation schedule and it really paid off! I started working stations in Georgia, California, Arizona, Arkansas, Oregon, Washington, Louisiana, Texas, Missouri, North Dakota, Ohio, and Iowa. I feel that isn't bad for 3 watts input and the dipoles.

Since then, I've learned to match my antennas for maximum efficiency, always listening for the stronger signals, and to make the calls slow and clear because your signal might just be above the other operator's noise level. Above all have patience. This is the real key to QRPing. And it's easier for a CQing station to hear a weak signal calling him than a weak QRP station calling CQ. I know!

With a good rig, a well-tuned and matched antenna system, and an operator with determination and patience, QRP contacts will be a rewarding part of any amateur's operating activities. (Con'd next page.)

P P R A A D I R E C T O R S

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The PPRAA meets at 7:30pm on the Second Wednesday of each month in the Security Savings and Loan Building, East Platte at Union Blvd.

QRP Con'd: I built my station around a Ten-Tec Argonaut with a Heath HW-8 as backup rig. My antennas are a Hy-Gain TH3MK2 three-element tri-bander, with a 40m invec and a transmatch to tune the invec for 75m. I will admit most of my work is SSB but that is only 60%; the other 40% is CW. In the last 27 days since I set up the station, I've worked 35 states with 25 confirmed, also Canada and Mexico.

My present goal is QRP/WAS...then who knows where! So now you know a little about QRP. Get the old 6L6s out and start punching holes in the ionosphere with QRP.

Until next month, gud QRPing!

Mike Anderson WBØLEY

JANUARY MINUTES: The monthly meeting of the PPRAA was opened at 7:30 pm January 11, 1978 by Ray Uberecken WØWYZ at the Security Savings and Loan Building. The minutes for the December meeting were read by WBØTIC and approved by the membership present.

WØTGL and WBØBTY were recognized for passing the extra class examination. WBØPNX reported a treasury balance of \$596.30. He also acknowledged a \$100 donation from the Colorado Motorcycle Trail Riders Association for the PPRAA assistance in the Enduro. The "Hammy Award" was presented to WØPT by 2-meters for his long and dedicated service to the PPRAA. He has been the cornerstone of the organization for many years.

Committee Reports:

XYL--The XYLS plan to organize a bake sale and flea market at the swapfest in March.

Programs--WØWYZ announced the February program would be "Home Brew" night.

Zero Beat--Request was made for the novices to collage, staple, and label the Zero Beats. This will help to get the Zero Beat into the mail earlier and help reduce some of the cost. The main purpose is to start including novices in club activities. (Con'd on page 4.)

THE

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Mike Anderson, WBØLEY,
634-8549.

WANTED: Portable 2-meter FM rig.
Mike Anderson WBOLEY,
634-8549.

WANTED: Schematic and alignment
instructions for Halli-
crafters SX-101. Rob,
work: 633-6358;
home: 634-1897.

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MINUTES con'd:

Activities--WBØYKH listed the coming events: 1. VHF contest; 2. WIAW qualifying runs; 3. QSO Party of the Americas; 4. Ten-meter contest; 5. Frequency measuring test. The highlight event was the commemorative station KMLCC from Cape Cod honoring the 75th Anniversary of Marconi's first transatlantic QSO. Spark gap transmissions will be used 50 kc up from the lower band edges.

Interference--WØWYZ stated that the group had two simple complaints to work on.

Public Information--WBØMHP thanked all who participated in the Citadel demonstration January 5-6.

52 Net--WØMBZ, KØTER, K6DBR were appointed NCS for the following weeks.

Education--WBØTIC gave date, time and location information on the new classes to run from January 17 to April 20 at North Junior High.

CCARC--WØRNT announced that CCARC may have a "hamfest" (not swapfest) in the near future if enough people were interested. He also announced that the hams had been included in Vehicular Technology Conference to be held at the Denver Regency, March 23.

Announcements: The PPRA Computer Assn. will hold a hardware show February 17 at 7:00 pm at Washington Irving School. WBØKDN requested amateur radio help for the HandiCap Olympics at Copper Mountain. WBØTIB, Bud Widmar, was officially appointed the new Emergency Coordinator for the tri-county area.

The Colorado Springs Fire Department presented films on Cardio-pulmonary resuscitation and on the Hermlich Maneuver. The meeting was adjourned at 10:00 pm.

WBØTIC, Secretary

IN MEMORY of my grandad, who has been into electronics for a long time, and who helped my interest along, I'd like to share this paper written by him at the beginning of the century.

"THE WIRELESS TELEGRAPH"
(RECEIVING)

The receiving outfit of a wireless telegraph station consists of instruments which enable the operator to "pick up" or receive messages from other stations at a radius of from one to one thousand or more miles; depending of course upon the sensitiveness of the receiving instruments and the power of the transmitting station from which the message is being sent out.

Since a complete wireless station consists of both a receiving and a sending outfit, the same antenna may be and is most generally used for both and we may therefore describe receiving apparatus in the inverse order of the transmitting system.

The antenna contains a residual charge of electricity which is dormant under normal conditions, but as a wave front, set in motion by the transmitting set, glides by the station, the rising and falling of the waves will impart a slight oscillatory motion to the residual charge, just the same as a chip on the water is set in motion by the water waves. (Next page.)

WIRELESS Con'd: Means for manifesting these oscillations permit us to correctly read all signals sent out by the transmitting station.

The utmost harmony, however, must prevail between the oscillations in the antenna and those of the passing waves in order that the signals be as strong and distinct as possible. This harmony is brought about by an instrument consisting of a number of turns of fine wire wound very close to one another on a drum or core. The wire wound around this core serves the purpose of increasing the wave length of the receiving station exactly as if the same number of feet were added to the antenna itself only to a much greater extent.

Along the top of the coil are two sliding contacts which barely touch the turns of wire and which may be moved at will, thus enabling the operator to vary the length of his antenna until it equals that of the transmitting station. This is known as "getting in tune" and consequently this coil of wire is known as a "tuning coil."

After we have adjusted the oscillations in the antenna to harmonize with the passing waves from the transmitting station, an electrical pressure is created which can be detected and made manifest by suitable apparatus. This part of the system is called the coherer.

A coherer consists of loose metal filings placed between metal plugs in a glass tube. These metal filings ordinarily have a very high resistance to an electric current; that is, they will conduct only a very small amount of the original value of the current. However they become fairly good conductors of electricity when in the presence of the electric oscillations. This form of instrument is not sensitive enough to respond to very weak waves and consequently it is no longer used in commercial work. In its place an instrument called a detector is used. In connection with the coherer is a relay and a telegraph sounder which produce the audible signals.

A relay is an instrument which, when a very weak electric current is passed through it, will close a contact which in turn operates the telegraph sounder, much the same as when you press the button to ring an electric door bell.

A telegraph sounder is the instrument which forms the audible signals by means of short or long clicks which correspond to the dots and dashes of the Morse telegraph code.

Now if a relay and sounder are connected to a source of current in such a manner that the current will first have to pass through a coherer, they will not operate until the coherer is under the influence of electromagnetic waves and therefore not until waves are sent out by the transmitting station. There is however a difficulty which remains and must be overcome before the signals can be exact.

When the metal filings in the coherer are in the presence of electric oscillations, they become massed together so that when the oscillations cease the filings still cling tightly together and the signal is spoiled. This is overcome by mounting an ordinary electric bell beside the coherer so that as

(continued on next page.)

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WIRELESS con'd: soon as the oscillations cease the bell rings and the tapper hitting the glass tube containing the filings knocks them apart and they are then ready for the next signal.

As I have said before the coherer is not sensitive enough to be used in commercial work. This is also true of the relay and telegraph sounder, which have been displaced by the telephone receivers. These are much more sensitive and exact when used in connection with a good detector. The longest possible receiving radius of a coherer, sounder and relay would in all probability not exceed thirty miles under the most favorable conditions, while if a detector and good telephone receivers were used instead, the receiving radius under the same conditions would be about one thousand miles.

The distance of the antenna from the surface of the earth and its length also affect the radius of a station; the higher and longer the antenna, the greater the radius will be, in both receiving and sending.

One of the most powerful stations in the world is the one located at the top of Eiffel Tower in Paris. It is one thousand feet above the surface of the earth and has sufficient power to communicate with the Marconi Station at Glace Bay Nova Scotia, about seven thousand five hundred miles away across the Atlantic.

Harley W. Hoffman
June 6, 1912

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FEBRUARY 1978

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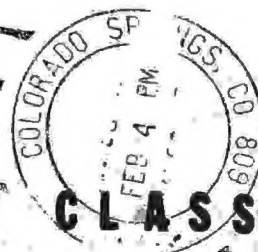
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